

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-9 (canceled).

10. (new): An X-ray generator tube comprising:

an electron gun emitting an electron beam,

an anode unit comprising a target carrier assembly having a flat surface known as the target onto which the electron beam is focused in a focusing spot, the target carrier assembly having an axis of revolution substantially perpendicular to the mean direction of the electron beam and passing through the plane of the target.

11. (new): The tube as claimed in claim 10, wherein the target carrier assembly is of cylindrical shape overall with a circular cross section, the target being situated in a plane passing through the axis of revolution of the cylinder and the anode unit comprising a housing, also of cylindrical shape overall and in which said target carrier assembly is housed such that the axis of revolution of the target carrier assembly passes through the focusing spot.

12. (new): The tube as claimed in claim 11, wherein the target carrier assembly comprises at least one internal cooling-fluid-circulation duct passing through the target carrier assembly in a direction substantially parallel to its axis of revolution and passing under the target in order to cool it.

13. (new): The tube as claimed in claim 12, wherein the duct comprises a central part known as an exchanger placed under the target and formed of several secondary ducts of cylindrical shape and with generatrices parallel to the axis of revolution of the target carrier assembly.

14. (new): The tube as claimed in claim 13, wherein the cross section of the secondary ducts is circular.

15. (new): The tube as claimed in claim 14, wherein the secondary ducts have a diameter of a size greater than the thickness of the wall separating them.

16. (new): The tube as claimed in claim 13, wherein the cross section of the secondary ducts is triangular or arch-shaped.

17. (new): A method for producing an anode unit assembly for an X-ray generator tube, comprising the following steps:

producing a target carrier assembly having a flat surface known as a target that has an axis of revolution passing through the plane of the target;

producing an anode unit comprising a housing;

inserting the target carrier assembly in the housing of the anode unit such that the axis of revolution is substantially perpendicular to the mean direction of the electron beam emitted by the tube ;

setting the angle of inclination  $\alpha$  of the target to said mean direction by rotating the axis;

fixing the target carrier assembly into the anode unit.

18. (new): The method for producing an anode unit assembly as claimed in claim 17 comprising a target carrier assembly as claimed in claim 4, wherein the step of producing the target carrier assembly comprises the following substeps:

producing a first mechanical assembly of cylindrical shape overall comprising a main duct passing through said first assembly in a direction substantially parallel to its axis of revolution and in its central part a recess comprising a flat surface, the main duct opening into this recess;

producing a second mechanical assembly comprising a flat top surface and a bottom surface comprising identical grooves;

assembling the second assembly in the recess of the first assembly in such a way that the grooves are placed facing the flat surface of the recess, the top surface of the second assembly constituting the target, the collection of grooves of the second assembly and of the flat surface of the recess constituting so many secondary ducts that form the exchanger.